# United States Department of the Interior
# Bureau of Land Management

**Environmental Assessment**
DOI-BLM-UT-C030-2010-0007-EA

**July 2011**

# Cottonwood Road Tortoise Protection Fence Project

***Location:*** Cottonwood Road, Red Cliffs National Conservation Area
Washington Co, UT

***Applicant/Address:*** Bureau of Land Management, St. George Field Office. 345 E. Riverside Drive, St. George, UT. 84790

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## 1.0 PURPOSE & NEED

### 1.1 Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of repairing existing range-type fencing and installing new fencing along the road right-of-way (ROW)for Cottonwood Road in Red Cliffs National Conservation Area (NCA), managed by the St. George Field Office (SGFO) of the Bureau of Land Management (BLM) in Washington County, Utah. The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27.

An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the selected alternative, which could be either the proposed action, or another alternative. A Decision Record (DR), including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in the Environmental Impact Statement (EIS) prepared in support of the *St. George Field Office Record of Decision and Resource Management Plan* (RMP), approved in March 1999.

### 1.2 Background

The Red Cliffs NCA was designated in 2009, through the Omnibus Public Land Management Act of 2009 (P.L.111-11). The NCA includes 45,000 acres of BLM-managed public land, located as shown on Figure 1, in south-central Washington County. The Congressionally-identified purposes of the NCA are:

> *Conserve, protect, and enhance for the benefit and enjoyment of present and future generations the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the National Conservation Area.*

The NCA comprises approximately 70% of the land base of the collaboratively-managed multi-jurisdictional Red Cliffs Desert Reserve (Reserve), managed to assist the recovery and delisting of the Mojave Desert tortoise, (*Gopherus agassizii*), a federally-listed threatened species under the Endangered Species Act. The land base of the NCA is also within designated critical habitat for the Mojave Desert tortoise, within the Upper Virgin River Recovery Unit, identified by the U.S. Fish and Wildlife Service (Service) in the *Recovery Plan for the Mojave Desert Tortoise* (Service, 1994)

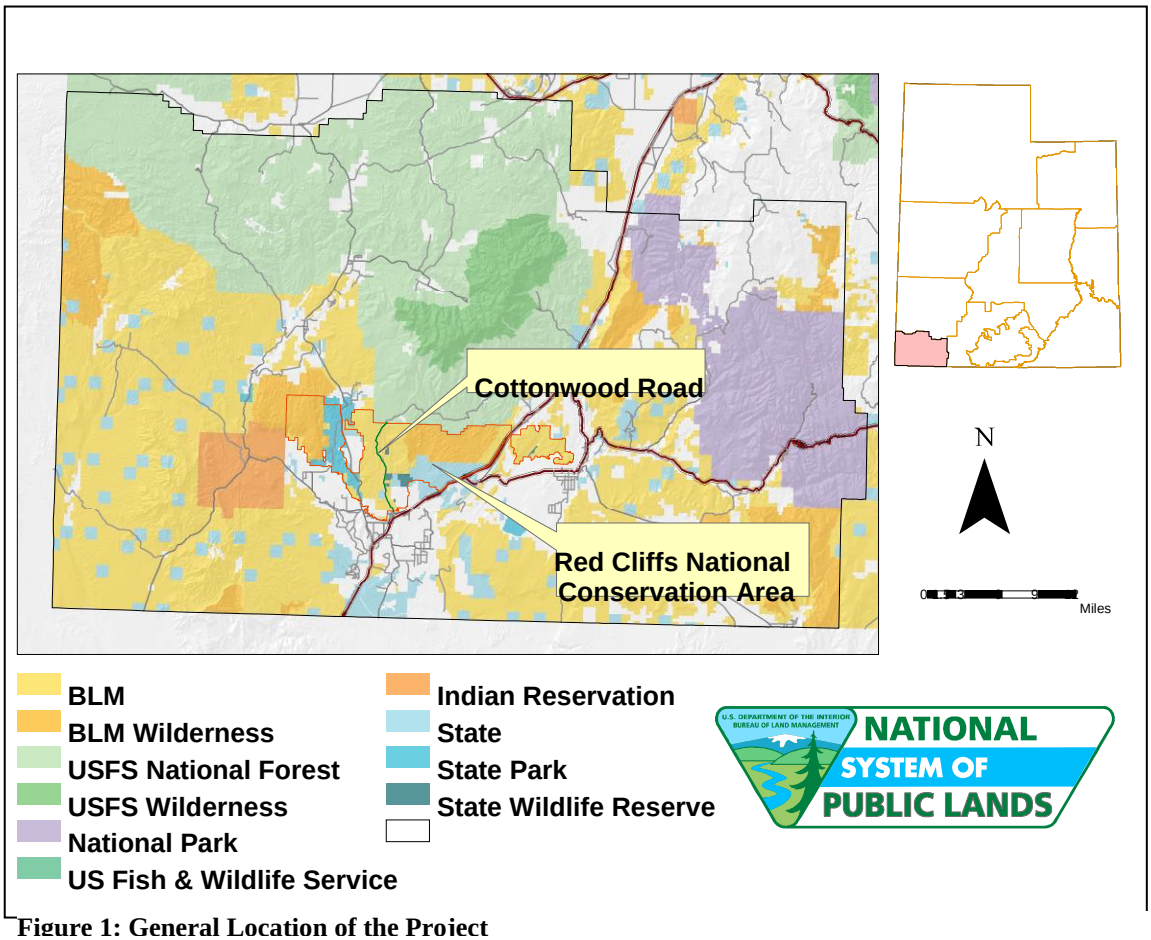



**Figure 1: General Location of the Project**

### 1.3 Need for the Proposed Action

Action is needed to repair existing fencing and construct new tortoise protection fencing along the ROW for Cottonwood Road that will effectively prevent Mojave Desert tortoises from gaining access to the roadway and trailhead parking areas adjacent to the roadway. On the roadway, the slow-moving tortoises are easily injured or killed by motorized vehicles that are often traveling a high speeds along Cottonwood Road (UDWR 2010). In trailheads, tortoise may take shelter under parked vehicles, only to be injured or killed when the vehicles are later moved.

Fence repair and construction along the Cottonwood Road ROW are also needed to prevent unauthorized off-road driving by motorized vehicles, especially ATVs and motorcycles, from traveling cross-country in designated critical habitat and elsewhere in the NCA. It would also reduce the amount of trash that is illegally dumped on public lands adjacent to the roadway. In areas where the existing ROW fencing has not been repaired or where no fencing exists, these unauthorized activities have damaged and degraded habitat. At the boundary between the NCA and the Dixie National Forest, the unrepaired ROW fencing also allows domestic livestock to travel from the National Forest, where grazing is authorized, into the NCA, where this is not a permitted activity.

Action is also needed to replace older, small gauge wire tortoise protective mesh that was previously installed on the ROW fencing, as this mesh does not allow lizards, rodents, and other small species to pass through it; mortalities frequently occur when these small species become trapped in the mesh.

### 1.4 Purpose(s) of the Proposed Action

The SGFO proposes to repair, construct, and/or improve approximately 11 miles of road right-of-way fencing and trailhead parking area fencing on public lands along Cottonwood Road in the Red Cliffs NCA. The purposes of this fencing would be: 1) to decrease or eliminate injuries and mortalities to Mojave Desert tortoises and other wildlife; 2) to protect designated critical habitat for the Mojave Desert tortoise and habitat for all species, by preventing unauthorized off-road travel by motorized vehicles and illegal dumping; and 3) to provide protection for the other resource values of the NCA, including cultural and historic resources, that also are being damaged or degraded by the unauthorized activities described above.

### 1.5 Conformance with BLM Land Use Plan(s)

**St. George Field Office Record of Decision and Resource Management Plan (ROD/RMP)**

The proposed fencing would be installed on public lands administered by BLM's SGFO. Land use decisions for the project area are contained in the *St. George Field Office Record of Decision and Resource Management Plan*, 1999 (ROD/RMP). Specifically, the Proposed Action is in conformance with the following ROD/RMP land use decisions:

• *FW-16 b: Fences needed to control tortoise movements or to prevent vehicle of pedestrian traffic in protected areas will be installed, as needed, in accordance with HCP guidelines. In collaboration with user groups, access points will be provided to allow ingress and egress for authorized purposes and in use of approved trails.*

*RC-17 BLM will work with Washington County HCP partners and interested user groups in indentifying, designating, and maintaining hiking, biking, and equestrian trails, trail heads, and rock climbing areas in the HCP Reserve. Trail and area locations and use prescriptions will be designed to avoid negative impacts of the sensitive resources being managed in the Reserve.*

• *VG-07 Where threatened and endangered plant species occur on public lands in Washington County, BLM will collaborate with affected local, state, and federal agencies and researchers in the implementation of approved recovery plans to stabilize and recover such species…*

*FW-15: All activities within desert tortoise critical habitat will be conducted in accordance with the terms and conditions described in the U.S. Fish and Wildlife Service Biological Opinion for the Mojave Desert tortoise (August 12, 1998)…*

### 1.6 Relationship to Statutes, Regulations, or Other Plans

**Omnibus Public Land Management Act of 2009 (P.L. 111-11)**

The Red Cliffs NCA was designated through the *Omnibus Public Land Management Act* of 2009. The Congressionally-identified purposes of the NCA are to:

> *1) to conserve, protect, and enhance for the benefit and enjoyment of present and future generations the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the National Conservation Area; and*
>
> *2) to protect each species that is—*

*(A) located in the National Conservation Area; and*

*(B) listed as a threatened or endangered species on the list of threatened species or the list of endangered species published under section 4(c)(1) of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1533 (c)(1).*

The Act further required the BLM to "*manage the NCA in a manner that conserves, protects, and enhances the resources of the NCA…in accordance with…the Federal Lands Policy and Management Act of 1976*".

The Act also established the National Landscape Conservation System (NLCS). The stated purpose of the NLCS is "*To conserve, protect, and restore national significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations*". Red Cliffs NCA is unit of the NLCS. The Act calls for the NLCS to be managed "*…in a manner that protects the values for which the components of the system were designated*".

**Washington County Habitat Conservation Plan (1996)**

The Red Cliffs Desert Reserve was created in 1996 and is managed by a confederation of entities, including the BLM, Washington County, the U.S. Fish and Wildlife Service (USFWS), the State of Utah's Snow Canyon State Park, the State of Utah's Division of Wildlife Resources, and several municipalities. The RCDR is comprised approximately 64,000 acres and is managed to assist the recovery and de-listing of the Mojave Desert tortoise and other at-risk Mojave Desert plant and animal species.

The RCDR is the key mitigation component of the *Washington County Habitat Conservation Plan* (HCP, Washington County 1996) and the county's Incidental Take Permit. The Incidental Take Permit allows growth and development to occur on non-federal lands in Washington County in an orderly and predictable manner, eliminating the need for multiple consultations with the USFWS under Section 10 of the Endangered Species Act (ESA) and the development of project-specific HCPs.

Management of the RCDR is consistent with direction from the HCP and the *Recovery Plan for the Mojave Desert Tortoise* (USFWS 1994). Activities that negatively impact listed species and their critical habitats are generally not authorized within the RCDR. If authorization is granted, impacts are mitigated to the maximum extent possible. Public recreation is authorized within the RCDR, but is managed through restrictions on the types of activities that can occur in each of the five identified zones of the RCDR – Cottonwood Road falls within Zone 3.

Zone 3 prescriptions require motorized vehicle travel to only occur on designated roads and non-motorized recreation uses to only take place on designated trails, with parking and trail access from designated trailheads. The designated roads, trails, and parking area/trailheads were identified in the *Red Cliffs Desert Reserve Public Use Plan*, approved in 2001. Restrictions are enforced through integrated methods that include fencing, signing, public education, and law enforcement patrols.

The *Washington County Habitat Management Plan* (HCP, 1995) states that "Fencing would be installed along major roads….It is estimated that 78 miles of fence would be installed".

**Red Cliffs Desert Reserve Public Use Plan/EA**

The *Red Cliffs Desert Reserve Public Use Plan* (PUP, approved in 2001) was prepared to refine the management prescriptions of the HCP with regard to recreational activities and other uses identified as being consistent with the overall management goals of the RCDR. Through the PUP, a system of non-motorized recreation trails was designated and motorized vehicle travel limited to a small number of existing paved and unpaved roads, one of which was Cottonwood Road.

## 1.7 Identification of Issues

### Public Involvement

Coordination concerning this proposal was conducted with the Red Cliff Desert Reserve's Habitat Advisory and Technical Committees, during regularly scheduled open public meetings May 13, June 10 and July 8, 2010. Public notification of the project occurred though posting of the project proposal on BLM Utah's Environmental Notification Bulletin Board (ENBB), a BLM website used to notify the public of potential projects on public lands in Utah. Notice of the proposed project was posted to ENBB on August 23, 2010. A similar posting was made in the Public Room of the BLM's St. George Field Office, St. George, Utah. A coordination meeting was held with the various entities that hold ROWs for utilities and water pipelines on June 8, 2010. Input from the ROWs holders was used to locate the proposed fence line so that access to the power transmission and distribution lines and water pipelines for maintenance or upgrades would not be impeded.

A Notice of Availability (NOA) for the EA was mailed to state, tribal, and local government entities, as well as federal right-of-way holders and other interested parties.. The preliminary EA was posted on the ENBB and a review and comment period provided. Chapter 5 of this EA contains additional information on the coordination and consultation conducted for the project. Any issues raised by the public or federal, state, and local governmental entities were considered by BLM in the development of the Proposed Action and analyzed in the direct, indirect, and cumulative impacts related to this proposal and a No Action alternative.

### Issues Carried Forward for Analysis

Based on the Interdisciplinary Team Analysis Record Checklist, the issues being carried forward for analysis in this EA address the values of the NCA that could be measurably impacted by the proposal to repair and construct fencing along the Cottonwood Road ROW. The following briefly summarizes the issue for the specific resource values.

*Threatened, Endangered, or Candidate Animal Species*

- This project would be completed for the protection of populations and designated critical habitat for the federally-listed Mojave Desert tortoise (threatened species) in the Upper Virgin River Recovery Unit. Tortoises could be impacted by fence construction activities, if such activities are proposed to occur during the active period for tortoises, generally between mid-March and mid October.

*Fish and Wildlife, excluding U.S. Fish and Wildlife-Designated Species*

- The project area supports as well as other native reptiles, birds, and mammals that are typically found in the Mojave Desert. A number of species that BLM has identified as "Sensitive Species", (listed in Chapter 3, section 3.3.1) also may occur within or near

the proposed fence line project area. Some of these species could be disturbed by fence construction activities.

*Lands/Access*

- Rocky Mountain Power, the City of St. George (Water and Power Department), and UAMPS (Utah Associated Municipal Power Systems) hold ROWs granted by BLM for overhead electrical transmission and distribution lines and buried water pipelines in the project area. These ROWs also provide road access for maintenance of these facilities. The installation of new fencing along the Cottonwood Road ROW could impede or prevent access for maintenance activities on these facilities.

### 1.8 Issues Considered but Eliminated from Further Analysis

Resource issues were identified by a BLM Interdisciplinary Team (IDT) of resource specialists who reviewed the project and evaluated the potential effects to the human environment. Several resources were dismissed from detailed analysis in this EA, either because the resource is not present in the Project Area or would not be measurably affected by the proposal or alternatives. The rationale for dismissing resource values is presented through the IDT Analysis Record Checklist in **Appendix A.**

### 1.9 Summary

This chapter has presented the purpose and need of the proposed project, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues identified above, BLM has considered and/or developed a range of action alternatives. These alternatives are presented in Chapter 2. The potential environmental impacts or consequences resulting from the implementation of each alternative considered in detail are analyzed in Chapter 4 for each of the identified issues.

## 2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

### 2.1 Introduction

Three alternatives were initially proposed, although one was later rejected. This document focuses on the potential impacts of the Proposed Action and the "No Action" Alternative. The No Action Alternative has been included as a baseline for comparison of the impacts of the Proposed Action.

### 2.2 Alternative A – Proposed Action

The SGFO proposes to repair existing range-type fencing or construct new fencing on public lands along the road right-of-way (ROW) for Cottonwood Road, one of the roads available for motorized vehicle travel in the Red Cliffs NCA (Refer to Figure 2). Wire "tortoise protection" mesh (1x2 inch mesh) would be installed, as needed, on those sections of the ROW fencing that are in lower elevation areas of the NCA, where Mojave Desert tortoises are most likely to be encountered. All discarded fencing materials would be removed from the project area and properly disposed of or recycled.

This total amount of fencing proposed to be repaired, installed, or improved would be approximately 11 miles (6.5 miles each way, excluding land not managed by the BLM), on both sides of the roadway, 50 feet from the centerline of the road. This would include:

- Adding new range and tortoise fence parallel to existing (poor quality) range fence or existing narrow mesh tortoise fence.
- Replacing existing line of narrow mesh tortoise fence with range fence and new tortoise fence.
- Adding tortoise fence to existing range fence.
- Realigning existing fencing to bring it closer to the road, increasing available tortoise habitat on the non-road side of the fence.

Fence installation would include:

- Installation of steel end panels at the beginning and end of fence segments, at step-overs, and at all corners (or anywhere the fence changes direction).
- Steel stress panels at ¼ mile intervals along straight sections (although it is likely that no sections of the fence would extent ¼ mile without changing direction.
- Steel fence posts (T-posts) 16.5 feet apart.
- Installation of a wildlife friendly three wire fence. A two strand unbarbed wire would run 22 inches above the ground, a two strand barbed wire would run 8 inches above that, and a two strand barbed wire 12 inches above that.
- If tortoise mesh is needed (lowland areas), it would be attached to the bottom wire. In addition to the above ground portion, the mesh should extend 12 inches below ground (requiring trenching), to prevent burrowing animals from passing underneath.

- If the ground is too rocky to extend the mesh belowground, then the portion of mesh that would have been underground would instead be folded and laid flat on the ground, then buried under 3-4 inches of cobble. The ground would need to be scraped flat to accomplish this.

Fence specifications are included in Appendix B.

If federal funding is not adequate to complete all the actions identified, then project work would be prioritized, with repairs and/or construction completed first in the lowland areas of the NCA.

Proposed fencing repairs and/or new construction would also be completed, as a priority, in upland areas of the NCA where habitat damage from unauthorized OHV travel and illegal dumping or off-road vehicle use.

Administrative access roads would be fenced and gated, with 11 metal gates and three pedestrian stopovers proposed for installation to allow maintenance access to facilities and hiking trails.

Additional work would include repair or replacement of a gate at the boundary with Dixie National Forest (used to prevent tracked equipment from damaging the cattle guard).

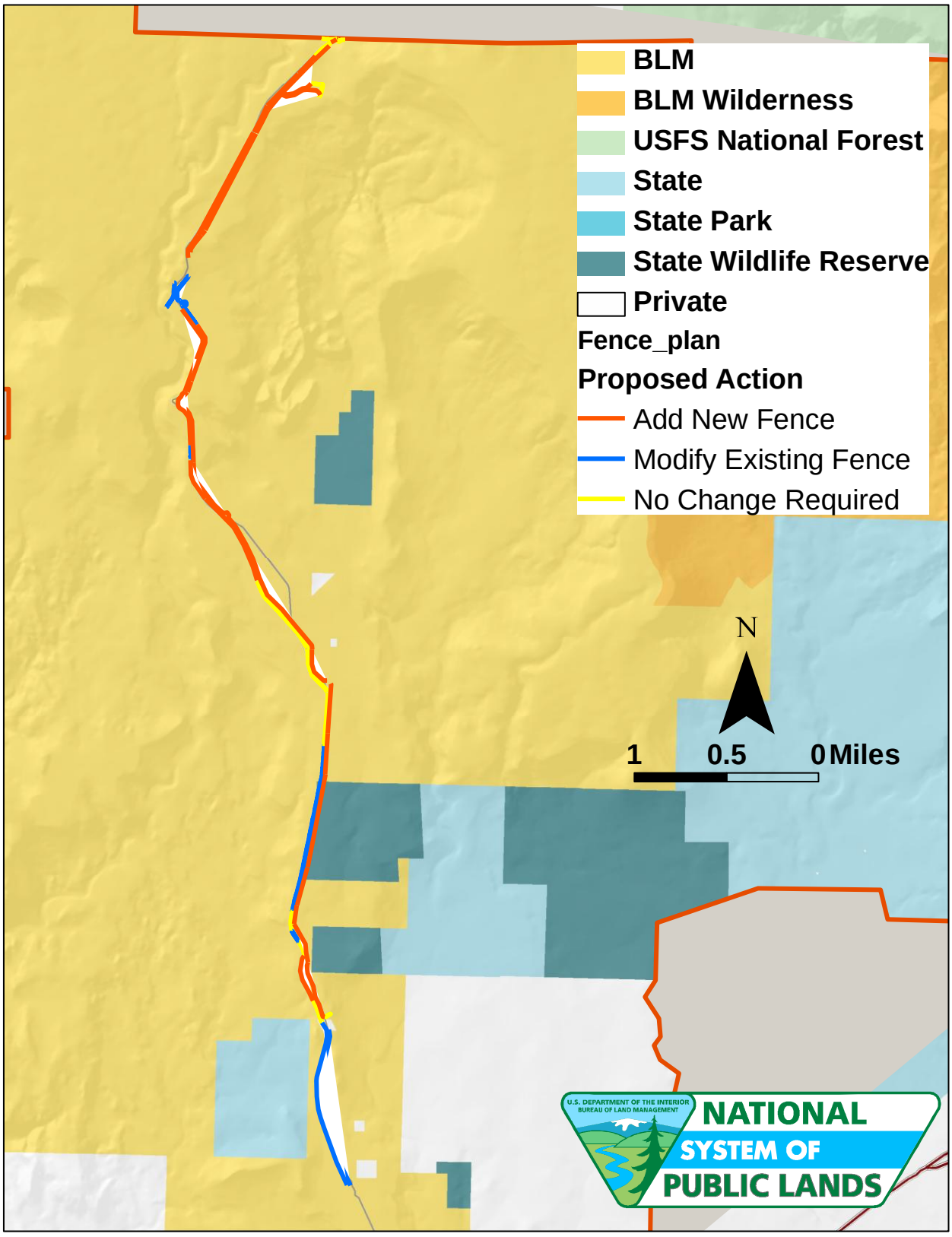



**Figure 2 – Map Showing Details of the Proposed Fencing Project**

### 2.2.1 Mitigation for Proposed Action

Mojave Desert Tortoise: This project would be completed for the benefit of desert tortoises and other wildlife species within the Red Cliffs NCA. Informal coordination with USFWS is complete; USFWS did not to require formal consultation.

If the Proposed Action is selected, this project would be not scheduled for construction during the active season for the Mojave Desert tortoise, generally mid-March to mid-October. No more than 30 days prior to the start of fencing work, field surveys would be completed by qualified biologists to identify any occupied tortoise burrows that might be within the construction activity area.

In the unlikely event that occupied tortoise burrows are found within the area to be fenced, and are located so that the burrow would be within the road corridor once the fence is completed, then the fence would be routed around the burrow so that the tortoise is excluded from the road corridor.

Fencing contractors or others (e.g. Youth Corps teams) who might be hired to complete this project would be educated about the Mojave Desert tortoise and working in tortoise habitat, to prevent inadvertent impacts to this species. If construction must occur during the active season, a qualified tortoise biologist would monitor all construction activities, to insure that no tortoises or dens would be disturbed. All existing desert tortoise fencing (1 inch by 1 inch mesh) would be replaced with the preferred design of tortoise exclusion fencing (see fencing specifications, USFWS, 2005) for the protection of desert tortoises and other wildlife species.

## 2.3 Alternative B – No Action

The No Action Alternative would not build new fencing nor upgrade existing fencing in the ROW for the Cottonwood Road. Existing fences would remain, and could be repaired as needed – these repairs could include replacement of wire or mesh in places where it is currently present, but damaged, and replacement of damaged fence posts. Existing wire would be re-attached to posts, if needed.

## 2.4 Alternatives Considered, but Eliminated from Further Analysis

An alternative was proposed that would have re-used materials from the existing fences along Cottonwood Road to build new fences closer to the road. However, a majority of the existing range fences are in poor condition, making it difficult and very time consuming to salvage deteriorated juniper posts and thousands of feet of tangled, rusted barbed wire that would likely prove too brittle for re-use. This alternative was rejected as being not cost effective (both in the short and long term) or efficient.

## 3.0 AFFECTED ENVIRONMENT

### 3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix A and presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

### 3.2 General Setting

Cottonwood Road runs for 7.5 miles along a north/south axis, beginning just north of the town of St. George. The south end of the road becomes Old [St. George] Dump Road, intersecting with Red Rock Road and East Middleton Drive about ¾ mile south of the NCA Boundary. The road continues North through the NCA, passing a large power substation, a large water tank supplied by water transported through a pipeline buried just east of the road (itself supplied by a well just north of the NCA), before leaving the NCA and entering Dixie National Forest. From there it connects to a network of local roads.

Within the NCA, the southernmost 1.8 miles of Cottonwood Road is paved; the pavement ends 0.4 miles north of the large water tank and everything north of that is unpaved.

Where the road crosses the southern boundary of the NCA, the elevation is 3200 feet, increasing to 4700 at the northern boundary where the road enters Dixie National Forest.

This area receives less than 10 inches of average annual precipitation and supports vegetation typical of a transition zone between the Mojave Desert, Great Basin Desert, and the Colorado Plateau. In this transition zone, sagebrush communities of the Great Basin merge with desert scrub and blackbrush-dominated communities that typify the Mojave Desert. These two ecological zones are interspersed with grasslands of the Colorado Plateau.

### 3.3 Resources/Issues Brought Forward for Analysis

#### 3.3.1 Fish and Wildlife Excluding U.S. Fish and Wildlife Service Designated Species:

The project area supports small mammals, birds, and reptiles which are concentrated along the larger washes. Wildlife that typically would be found in this area include: badgers (*Taxidea taxus*), antelope ground squirrels (*Ammospermophilus leucurus*), kangaroo rats (*Dipodomys* species), deer mice (*Peromyscus maniculatus*), desert wood rats (*Neotoma lepida*), Gambel's quail (*Lophortyx gambelii*), mourning doves (*Zenaida macroura*), common ravens (*Corvus corax*), wrens (*Cistothorus palustris*), (*Salpinctes obsoletus*), house finches (*Carpodacus mexicanus*), side-blotched lizards (*Uta stansburiana*), and Western whiptails (*Cnemidophorus tigris*). Infrequently, larger animals such as raptors, coyotes (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*) and even mule deer (*Odocoileus hemionus*) may pass through the area.

The following BLM State Sensitive Species may be found in the project area: ferruginous hawk (*Buteo regalis*, permanent resident, fairly common), short-eared owl (*Asio flammeus*, transient, rare), fringed myotis (*Myotis thysanodes*, permanent resident, uncommon), kit fox (*Vulpes macrotis*, permanent resident, uncommon), spotted bat (*Euderma maculatum*, permanent resident, rare), Townsend's big-eared bat (*Corynorhinus townsendii*, permanent resident, fairly common), common chuckwalla (*Sauromalus ater*, permanent resident, uncommon), Gila monster (*Heloderma suspectum*, permanent resident, rare), sidewinder (*Crotalus cerastes*,

permanent resident, fairly common), Western banded gecko (*Coleonyx veriegatus*, permanent resident, uncommon), Western threadsnake (*Leptotyphlops humilis*, permanent resident, rare), and zebra-tailed lizard (*Callisaurus draconoides*, permanent resident, fairly common).

Some of these species may use the project area year-long, while others may use it part of the year.

### 3.3.2 Lands/Access

Utility Rights-of-Way

Power lines, water lines, and associated access roads are authorized by the BLM through formal right-of-way (ROW) authorizations, as provided for by FLPMA and previously analyzed through NEPA.

Power Transmission Lines

There are several sets of power transmission lines that parallel and cross the Cottonwood Road. From the substation, two lines extend north, parallel to the road, on the west side. The smaller distribution line (St. George Water and Power Department) leaves the road corridor ½ mile south of the turnoff to the former site of Moroni turkey farm (owned today by the Utah Division of Wildlife Resources). The larger transmission line (Rocky Mountain Power) continues to follow the road corridor for 2 ½ miles, beyond which the line leaves to road corridor and extends North West. A set of two large transmission lines crosses to road ½ mile south of the boundary with Dixie National Forest.

Powerlines adjacent to the road do not have or require access roads, but lines that are not adjacent to the road do have roads to allow access for maintenance.

Waterlines

St. George Water and Power Department holds a ROW from BLM for the Cottonwood Pipeline, a buried water pipeline that intercepts and crosses Cottonwood Road. The line moves water from a well on Dixie National Forest to the large municipal storage tank near the end of the pavement. Most of the water line is not very close to the road, but from the former Turkey Farm to the water tank the line is buried close to the east shoulder of the road.

Administrative Access

In addition to power and water lines that are very close to Cottonwood Road, there are additional lines and facilities that are more distant from the road, but which are accessed by administrative routes that intercept Cottonwood Road. Public use of these roads is prohibited, through the Red Cliffs Desert Reserve PUP; they may only be used by parties specifically permitted by the BLM, for the purpose of maintaining or repairing these facilities.

Road Right of Way

The City of St. George maintains the paved portion of Cottonwood Road, Washington County maintains the unpaved part, but neither entity holds a FLPMA ROW from BLM. Washington County maintains an RS 2477 claim to the route.

### 3.3.3 Threatened, Endangered or Candidate Animal Species

**Mojave Desert tortoise**

The project passes through habitat areas that support low to medium densities of Mojave Desert tortoises within the Red Cliffs NCA. The areaprovides fairly good tortoise habitat – vegetation contains a mix of shrubs, forbs, and annual grass. Invasive annual grasses have not invaded this area as intensely as many other areas and fires have not ravaged this area yet.

There have been some tortoise fatalities in the road corridor. From 1993-2005, nine tortoises were killed by vehicles on Cottonwood Road. By 2005, the southern ¼ of the road (where tortoise densities are thought to be highest) was fenced, and no mortality has been documented since (UTDWR 2010).

Mojave Desert tortoises are long-lived herbivores that are active above-ground primarily during the spring, early summer, and fall months. The remainder of the year they spend in burrows, escaping the extreme weather conditions of the desert. The life history strategy of the species depends on its longevity, which allows for many reproductive opportunities over the course of a many decade lifespan. Mature females lay on average less than a dozen eggs per year, but the survival rates for hatchlings and juveniles is low, resulting in an overall tortoise population growth rate of less than 0.5% per year. Immature tortoises are subject to predation by ravens, coyotes, and other species, injuries and mortalities from motorized vehicles, trampling by sheep and cattle, collection by humans, and succumb to infectious diseases, such as an upper respiratory tract disease that has been spread to wild populations from non-native turtles commonly kept as household pets.

The Mojave Desert tortoise was listed a threatened species on April 2, 1990 for those populations and habitats located north and west of the Colorado River (areas of southern California, Nevada, and Utah, northeastern Arizona). The listing was prompted by declines in tortoise populations throughout this range that were attributed to two primary factors: the direct loss of individuals and habitat degradation / fragmentation caused by human activities. Human population growth, urbanization sprawl, the proliferation of interstate power lines and utility corridors, OHV recreation, and wild land fires were considered to be the major contributors to habitat degradation and fragmentation across the Mojave Desert.

In 1994, the USFWS designated critical habitat for Mojave Desert tortoise and prepared a Recovery Plan. Approximately 129,000 acres in Washington County, Utah were designated as critical habitat, of which 89,400 acres were managed by BLM; 27,600 acres were lands managed by the State of Utah; 10,500 acres were privately held; and 1,600 acres were Indian Tribal lands. The Recovery Plan identified various recovery units and recommended management actions that needed to be implemented in order to protect tortoise populations and critical habitat.

Two recovery units were identified as overlapping in Washington County: the Upper Virgin River Recovery Unit, located in the St. George Basin, and the Northeastern Mojave Recovery Unit, which includes all Mojave Desert habitat in the southwestern corner of the county. The RCDR/ NCA encompasses the Upper Virgin River Recovery Unit, the smallest recovery unit identified in the Recovery Plan and evaluated to be the most at risk, because of its small land base and proximity to the very rapidly urbanizing St. George Basin.

The Washington County HCP was approved by the USFWS in 1996. The RCDR forms the key mitigation component of the HCP and the county's Incidental Take Permit. The Utah Division of Wildlife Resources (UDWR) has monitored tortoise habitat conditions and population trends within the RCDR since 1996. According to UDWR data, habitat conditions have improved in many areas of the RCDR, based on management of the land base to restrict or eliminate uses and human activities that degrade and fragment habitat.

California condors (*Gymnogyps californianus*, Federal Endangered Species) may use the project area infrequently (generally not suitable condor habitat) for hunting and foraging. No nests, roosts, or other special use areas for California condors have been identified in the project area.

## 4.0 ENVIRONMENTAL IMPACTS

### 4.1 INTRODUCTION

The potential consequences or effects of each alternative are discussed in this chapter. The intent is to provide a basis for comparison of the effects of each alternative on the resources described in Chapter 3. All known mitigation measures have been included in the design of the Proposed Action, thereby reducing or eliminating a majority of potential environmental impacts.

Direct effects are those caused by the action and occur at the same time and place. Indirect effects are those that are reasonably foreseeable consequences of the action but are later in time or further removed in distance from the direct effects. Both of these types of effects are discussed in this section.

Impacts can be positive, seen as benefitting the resource over the short and long term, or negative, seen as a detriment to the resource.

Environmental impacts that could result from implementation of the Proposed Action or No Action Alternative are quantified where possible. In the absence of quantifiable data, the professional judgment of BLM resource specialists or other knowledgeable sources was used. Impacts may be described using ranges of potential impacts or in qualitative terms, if appropriate. The intensities of impacts to each resource are described using the following guidance:

Negligible: No noticeable changes to the resource would occur, and any impacts would be at or below the level of detection. If detected, the impacts would be considered slight. For negative impacts, mitigation measures would not be necessary.

Minor: Changes to the resource would be measurable, although the changes would be small, short-term (less than one year), and localized. For negative impacts, mitigation measures would not be necessary.

Moderate: Changes to the impacted resource would be measurable, may have appreciable consequences, and would be noticeable. For negative impacts, mitigation measures may be necessary.

Major: Changes to the impacted resource would be measurable, have substantial consequences, and be readily noticeable. For negative impacts, mitigation measures would be required.

**Other NEPA Analyses that Limit the Scope of this EA:**

This EA is tiered to the assessment prepared in support of the RCDR PUP (EA-UT-045-98-07 (FONSI/DR June 29, 2001) evaluated the impacts to the human environment related to the management of public lands in Zone 3 for non-consumptive public recreation activities, such as hiking, mountain biking, equestrian trail riding, and nature photography.

### 4.2 General Analysis Assumptions and Guidelines

Describe the analytical methodology sufficiently so that a reader can understand how the analysis was conducted and why the methodology was used (40 CFR 1502.24). This explanation must include a description of any limitations inherent in the methodology. If there is substantial dispute over models, methodology, or data, you must recognize the opposing viewpoint(s) and explain the rationale for your choice of analysis. You may place discussions of methodology in the text or in the appendix of the document. To the extent possible, we recommend that the analysis of impacts be quantified.

The analytical assumptions, including geographic and temporal scope, the baseline for analysis, as well as reasonably foreseeable future actions must be clearly stated. Explain any assumptions made when information critical to the analysis was incomplete or unavailable (40 CFR 1502.22).

### 4.3 Direct and Indirect Impacts

Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

#### 4.3.1 Alternative A – Proposed Action

##### 4.3.1.1 Fish and Wildlife Excluding U.S. Fish and Wildlife Service Designated Species:

Construction of the fence would have a minor, short term, direct, localized impact to wildlife through the disturbance associated with construction activities.

Upon completion of the fence, this disturbance would cease. Larger animals such as deer could jump over the fence, more medium sized animals like coyotes and kit foxes could pass over the tortoise mesh and between the strands of wire, small species like Gila monsters and Western banded gecko could pass through the mesh itself – the fence would mostly only limit the movements of tortoise, people, and vehicles.

In the long term, wildlife would indirectly benefit through improved habitat protection as off-road vehicle use and unauthorized use of administrative roads decreases, illegal dumping ceases, and visitors spend less time travelling off-trail. In areas further from the road, deer and other species might experience less harassment as off-road vehicle use and unauthorized use of administrative routes ceases.

##### 4.3.1.2 Lands/Access

<u>Powerlines</u>

The proposed fence line would be routed to ensure that all utilities can continue to be accessed by authorized employees, while preventing unauthorized use of administrative roads – in some places this would place the fence as much as 100 feet from the road.

<u>Waterlines</u>

The buried water line would be located and marked prior to construction, which would ensure that the fence posts would not damage the buried pipe. There would be no impact to the water line.

Administrative Access

The fence and associated gates would allow proper access of administrative routes, while denying unauthorized access. There would be a minor, long term benefit due to decreased unauthorized use of administrative routes.

Road Right of Way

The proposed fence line would be outside the road maintenance right of way and would have no adverse impacts to right of way issues in the road corridor or Washington county's maintenance of the road.

#### 4.3.1.3 Threatened, Endangered or Candidate Animal Species

**Mojave Desert Tortoise**

There would be a minor, positive long-term impact to Mojave Desert tortoises.

Mitigation efforts ensure that construction of the fence would not harm tortoises, because the construction of the fence will take place during the inactive season, and because tortoise monitors would be present if the project falls behind schedule and extends later than planned.

Once completed, the tortoises would lose some habitat in a few areas, due to the fence needing to be setback from the road to allow for road maintenance right of way and powerline access. However, this loss of habitat would be replaced by new habitat becoming available as some currently existing fencelines are relocated closer to the road. Additionally, there would be improvement of much larger habitat areas due to decreased off-road vehicle travel, decreased dumping, and the decrease of unauthorized use of administrative access roads.

#### 4.3.1.4 Monitoring and/or Compliance

The area would be surveyed for tortoise and active dens prior to beginning work. In addition, BLM and HCP tortoise monitors would periodically visit the work site to ensure compliance with tortoise safety guidelines. If the project falls behind schedule and work needs to occur during the tortoise active season, a monitor would be on-site daily.

### 4.3.2. Alternative B – No Action

If the fence were not built, previously existing trends and conditions would continue. Repairs could still be made to existing fences, as needed.

#### 4.3.2.1 Fish and Wildlife Excluding U.S. Fish and Wildlife Service Designated Species:

Smaller lizards and rodents could continue to be caught in the older, narrow-mesh tortoise fence and die. Deer and other wildlife could continue to be harassed by off-road vehicle travel and unauthorized use of administrative routes. As such, the implementation of the "No Action" alternative would have minor long-term adverse direct and indirect impacts to wildlife.

#### 4.3.2.2 Lands/Access

If the No Action alternative were adopted, there would be no change from current Land/Access conditions – occasional off-road activity would continue to occur, along with unauthorized use of administrative access roads. Access to power and water lines would not change from current conditions. There would be no impact to lands or access resources.

#### 4.3.2.3 Threatened, Endangered or Candidate Animal Species

**Mojave Desert Tortoise**

The No Action alternative would continue the current trend of slight, adverse impact to Mojave Desert tortoises through the potential to killed or injured by vehicles, and through possible habitat damage associated with off-road driving activities. This would be a long term, localized impact.

#### 4.3.2.4 Monitoring and/or Compliance

Under the No Action Alternative, no monitoring or compliance would occur.

## 4.4 Cumulative Impacts Analysis

"Cumulative Impacts" are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

The Cumulative Effects Area for this project is Cottonwood road, and a surrounding one-mile buffer on the east and west side of the road. The majority of these lands are BLM Public Lands, but some private land also occurs, including the large electrical substation and surrounding land owned by Rocky Mountain Power.

### 4.4.1 Fish and Wildlife Excluding U.S. Fish and Wildlife Service Designated Species:

#### 4.4.1.1 Cumulative Impact Area (CIA)

The cumulative impact area for wildlife is a one-mile buffer to the east and the west of Cottonwood Road. Most of this is BLM public lands, but there is also a large parcel of private land owned by Rocky Mountain Power, and some areas owned by Utah Department of Wildlife Resources.

#### 4.4.1.2 Past and Present Actions

Past or ongoing actions that affect the same components of the environment as the proposed action are varied. The area is close to the cities of St. George and Washington, and the presence of those cities has had an impact on wildlife, although that impact would be difficult to quantify.

Construction of roads may have interrupted travel routes used by wildlife for migration, or to access lambing or calving areas, mineral licks, or water sources. Construction of roads has likely contributed to wildlife mortality through vehicle/animal collision, including some wildlife mortality that has occurred within the NCA.

Development outside the reserve has probably further contributed to habitat fragmentation as large areas of habitat have been converted into a semi-urban landscape.

Since 1996 management of the Red Cliffs Desert Reserve for protection of Mojave Desert tortoise and habitat has reduced the impacts to tortoise populations and designated critical habitat.

Fuels reduction has occurred along the shoulders of the southern sections Cottonwood Road in May and June of 2011 to reduce the risk of wildfire.

#### 4.4.1.3 Reasonably Foreseeable Action Scenario (RFAS)

The following RFAS identifies reasonably foreseeable future actions that would cumulatively affect the same resources in the cumulative impact area as the proposed action and alternatives.

The BLM is currently developing a management plan for the Red Cliffs National Conservation Area, as required by P.L. 111-11.

Wildland fuels reduction may occur again in 2012 or later, if the cheatgrass load is high again.

#### 4.4.1.4 Cumulative Impact Analysis

Implementation of the Action Alternative would have negligible influence on cumulative effects, because the fence style proposed for use would have very little impact on the mobility of any wildlife, other than Mojave Desert tortoise.

Implementation of the No Action alternative would have no impact on the cumulative impacts to wildlife, other than a continuation of current trends and conditions.

### 4.4.2 Lands/Access

#### 4.4.2.1 Cumulative Impact Area

Regarding lands and access, the Cumulative Project Area would be the Cottonwood Road corridor, and any administrative routes or any utilities accessed from the road.

#### 4.4.2.2 Past and Present Actions

The Washington County Habitat Conservation Plan defined existing utility lines and administrative access roads. Approval of the HCP and passage of P.L. 111-11 did not prohibit new utility corridors, but did require state that the Red Cliffs Desert Reserve and Red Cliffs NCA would be "avoidance areas for the location of new utilities". The HCP encourages new utilities to be aligned with existing utilities and requires them have a minimum habitat disturbance.

#### 4.4.2.3 Reasonable Foreseeable Action Scenario

There are no approved plans for any entity to expand utilities within the Impact Area. Development of additional utilities could be addressed by the development of the Red Cliffs NCA Management Plan.

#### 4.4.2.4 Cumulative Impact Analysis

Implementation of the Action Alternative could countervail some of the adverse cumulative impacts of the use of administrative routes, due to the reduction of unauthorized use of those routes.

Implementation of the No Action alternative would have no impact relative to the Cumulative Impacts to Lands/Access, other than a continuation of current trends and conditions.

### 4.4.3 Threatened, Endangered or Candidate Animal Species

#### 4.4.3.1 Cumulative Impact Area

For the Threatened, Endangered, or Candidate Animal species, the Cumulative Impact Area is the entire Red Cliffs NCA.

#### 4.4.3.2 Past and Present Actions

Mojave Desert tortoise has been heavily impacted by several factors – Tortoise Upper Respiratory Disease has killed or sickened very large numbers of the population, although estimates are imprecise. Tortoise habitat has been impacted by invasive species, especially annual grasses, such as cheatgrass and red brome, which have altered wildland fire regimes and resulted in a significant decline in the availability of the native plants which the tortoises need for food. Desert tortoises have also been directly killed or injured by annual grass driven fires.

Roads and development have fragmented tortoise habitat, and tortoises have been killed in vehicle/tortoise collisions.

#### 4.4.3.3 Reasonable Foreseeable Action Scenario

Within the Red Cliffs NCA, there are no reasonably foreseeable actions that would negatively impact Desert Tortoise. The BLM is currently developing a management plan for the Red Cliffs National Conservation Area, as required by P.L. 111-11.

#### 4.4.3.4 Cumulative Impact Analysis

Construction of the fence would countervail the impacts of vehicle/tortoise accidents, by keeping tortoise off the road, and keeping vehicles on the road. On the other hand, the fence would add to the impact of habitat fragmentation by introducing one more barrier to tortoise movement.

## 5.0 CONSULTATION AND COORDINATION

### 5.1 Introduction

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. The ID Team Checklist provides the rationale for issues that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in sections 5.2 and 5.3 below.

### 5.2 Persons, Groups, and Agencies Consulted:

**Table 5-1**

**List of all Persons, Agencies and Organizations Consulted for Purposes of this EA.**

| Name | Purpose & Authorities for Consultation or Coordination | Findings & Conclusions |
|---|---|---|
| Red Cliffs Desert Reserve Habitat Conservation Technical Committee and Advisory Committee | Coordination of activities within the Reserve as required by the HCP. | Proposed project and alternatives presented to HCTC June 10, 2010 |

| | | |
|---|---|---|
| Washington County Commission | Coordination of activities with Red Cliffs Desert Reserve, as required by HCP. | |
| U.S. Fish and Wildlife Service | Consultation under the Endangered Species Act (16 USC 1531) | Informal Consultation with USFWS will be conducted to obtain concurrence with BLM Findings of Effect to Listed Species and Critical Habitat |
| Paiute Band of Utah<br>Shivwits Band of Paiutes | Consultation as required by the Native American Religious Freedom Act of 1978 (42 USC 1531) and (16 USC 1531) | Consultation with the Tribal groups to determine and address concerns |
| Utah Division of Wildlife Resources | Consultation related to State-list species, sensitive species, and game species. | Data and analysis provided by UDWR incorporated in Chapters 3 and 4 of this EA. |

### 5.3 Summary of Public Participation

Coordination concerning the Action Alternative has been conducted with the Red Cliff Desert Reserve's Habitat Advisory and Technical Committees, during regularly scheduled open public meetings. Public notification of the project occurred though BLM Utah's Environmental Notification Bulletin Board (ENBB), a BLM website used to notify the public of potential projects on public lands in Utah. Notice of the proposed project was posted to ENBB on August 23, 2010. A similar posting was made in the Public Room of the BLM's St. George Field Office, St. George, Utah.

A Notice of Availability (NOA) for the EA was mailed to interested parties, adjacent land owners. The preliminary EA was posted on the ENBB and a review and comment period provided. Any issues raised by the public or federal, state, and local governmental entities were considered by BLM in the development of the Proposed Action and analyzed in the direct, indirect, and cumulative impacts related to this proposal and a No Action alternative.

### 5.4 List of Preparers

#### 5.4.2 BLM Staff

| Name | Title | Responsible for the Following Section(s) of this Document |
|---|---|---|
| **Dawna Ferris-Rowley** | **National Conservation Area Manager** | **Technical Review for Compliance Adequacy** |
| **Tim Croissant** | **Biologist** | **Preliminary EA, Proposed Action** |

## 6.0 REFERENCES, GLOSSARY AND ACRONYMS

### 6.1 References Cited

USDI BLM Red Cliffs Desert Reserve Public Use Plan (2000)

USDI BLM. 1999. St. George Field Office (Formerly the Dixie Resource Area) Record of Decision. Utah State Office. March 1999

Utah State Department of Wildlife Resources. Mojave Desert Tortoise Mortality on Cottonwood Road. Electronic Spreadsheet, unpublished (2010).

Washington County HCP Steering Committee and SWCA, Inc. Environmental Consultants. Desert Tortoise Incidental Take Permit Application Documents. (1995)

### 6.2 List of Acronyms

**BLM** Bureau of Land Management

**DR** Decision Record

**EA** Environmental Analysis

**ENBB** Electronic Notification Bulletin Board

**ESA** Endangered Species Act

**FLPMA** Federal Land Policy and Management Act

**FONSI** Finding of No Significant Impact

**HCAC** Habitat Conservation Advisory Committee

**HCP** Habitat Conservation Plan

**IDT** Interdisciplinary Team Members

**NEPA** National Environmental Policy Act

**NOA** Notice of Availability

**OHV** Off-Highway Vehicle

**PUP** Public Use Plan

**RMP** Resource Management

**ROD** Record of Decision

**TC** Technical Committee

**AUMPS** Associated Utah Municipal Power Systems

**UDWR** Utah Division of Wildlife Resources

**USFWS** US Fish and Wildlife Service

## Appendix A: Interdisciplinary Team Checklist

**Project Title**: Cottonwood Road Fence

**NEPA Log Number**: DOI-BLM-UT-C030-2010-0007-EA

**File/Serial Number**:

**Project Leader**: Tim Croissant

**Project Description:** Install fence along both sides of Cotton Road to protect desert tortoise, Gila monster, and other wildlife. The fence keeps the wildlife off the road, people and cars on the road. Much of this fence replaces existing range fences which are in poor condition. Many sections already have tortoise fence and in many of those sections, the new fence can be built directly in line with the tortoise fence. Gates will be included for access to administrative routes. Many sections already have adequate fence and gates, those sections would be unchanged.

If current funding cannot fence the entire road corridor, then low elevation areas in the south will be the priority, with priority dropping further north and upland, although specific upland areas that need attention would be high priority.

The fence will be built parallel to the road, just outside the county right of way (66 feet wide).

Fence to be added:

- Add new fence parallel to existing (very poor quality) range fence, move tortoise fence from existing range fence to new fence: 8150 feet
- Add new fence parallel to existing tortoise fence, move tortoise fence to new fence (existing line of tortoise fence is set in cement, preventing range fence from being in the same line): 3100 feet
- Add new range fence to existing line of tortoise fence, connect tortoise fence to new fence: 5200 feet
- Add tortoise fence to existing fence: 2880 feet, including 300 feet wooden fence
- Move existing range fence to road, add tortoise fence: 600 feet
- Add 200 meters (640 feet) of new fence to protect resources (in upland areas, needs to be done even if entire road cannot be fenced) This is for areas where off-road vehicle damage is occurring but administrative access is not needed: 3 sections
- Add fence to prevent dumping: 900 feet
- Add gate and 200 meters new fence (in upland areas, needs to be done even if entire road cannot be fenced). This is to block non-administrative access to administrative routes: 4 sections
- Add new fence, range only (upland areas): 12,700 feet
- Add new fence, tortoise and range: 19,050 feet
- Add gate: nine gates without stepover, in addition to four gates previously mentioned
- Add gate and stepover: two gate/stepover combinations
- At twelve locations small, currently existing fence sections have ends that the new fence will connect onto

- At two locations, end pieces of existing fences need to be replaced, although the existing fence in those locations does not need to be replaced.
- The gate accessing the Moroni Turkey Farm will be moved to the junction with the main Cottonwood road. This is to prevent dumping and other bad behavior at the current location.
- The gate at the North boundary of the NCA will be repaired or replaced. This gate allows heavy tracked equipment to pass without damaging the cattle guard.
- 17 stabilizers will be needed (every ¼ mile on straight sections)
- 95 corners or end points will be needed, in addition to the ends previously mentioned.

Coupled with this, but not funded, is the removal of existing fences, some of which will be made redundant by the new fences, and some that have been redundant since cattle grazing was eliminated. Removal of fences could occur as a series of Dedicated Hunter projects, led by BLM or Red Cliffs Desert Reserve staff. Wooden fences posts could be retained or reused as period consistent posts for fences at the Orson Adams house or other historic sites.

Location: Cottonwood Road cuts through Red Cliffs National Conservation Area in a north/south line east of St. George, north of Washington City. Fence line would start where current fences end at the old dike just north of the large water tank, and would continue to the northern boundary of the NCA.

Maps and Photos: Maps and photos are located at: S:\SGFO\SGFO Projects\Cottonwood Fence. A large scale map is posted at Tim's Desk.

**DETERMINATION OF STAFF:** ***(Choose one of the following abbreviated options for the left column)***

NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected to a degree that detailed analysis is required
PI = present with potential for relevant impact that need to be analyzed in detail in the EA
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

| Determi-nation | Resource | Rationale for Determination* | Signature | Date |
|---|---|---|---|---|
| **RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)** | | | | |
| NI | Air Quality | Dust emission levels would increase slightly during construction. This impact would be short term and minimal. | D. Corry | 6/2/10 |
| NP | Areas of Critical Environmental Concern | There are no Areas of Critical Environmental Concern within or adjacent to the proposed project area. | D. Kiel | 6/25/10 |
| NP | BLM Natural Areas | There are no BLM Natural Areas within or adjacent to the proposed project area. | D. Kiel | 6/25/10 |
| NP | Cultural Resources | Class III pedestrian inventory has been completed of the proposed fenceline APE by a BLM Cultural Resource Specialist (2011). This inventory, coupled with a review of existing literature housed at the Utah State Historic Preservation Office and in St. George Field Office cultural resource databases, confirm that no National Register of Historic Places-eligible or listed properties are found within the APE. There would be no affects to historic properties, as none are present within the APE. | Dawna Ferris-Rowley Geralyn McEwen | 2 Feb. 11 |
| NI | Greenhouse Gas Emissions | GHG emissions from the proposed action are anticipated to be extremely minor, therefore, it is not necessary to complete detailed quantification or modeling. | R Schreiner | 6/3/10 |
| NI | Environmental Justice | The proposed action would not result in disproportionate adverse health or environmental impacts on minority or low-income populations. | D. Kiel | 6/25/10 |
| NP | Farmlands (Prime or Unique) | | D. Corry | 6/2/10 |
| PI | Fish and Wildlife Excluding USFW Designated Species | The project area supports small mammals, birds, and reptiles which are concentrated along the larger washes. Wildlife that typically would be found in this area include: badgers (Taxidea taxus), antelope ground squirrels (Ammospermophilus leucurus), kangaroo rats (Dipodomys species), deer mice (Peromyscus maniculatus), desert wood rats (Neotoma lepida), Gambel's quail (Lophortyx gambelii), mourning doves (Zenaida macroura), common ravens (Corvus corax), wrens (Cistothorus palustris), (Salpinctes obsoletus), house finches (Carpodacus mexicanus), side-blotched lizards (Uta stansburiana), and Western whiptails (Cnemidophorus tigris). Infrequently, larger animals such as raptors, coyotes (Canis latrans), gray fox (Urocyon cinereoargenteus) and even mule deer (Odocoileus hemionus) may pass through the area.<br>The following BLM State Sensitive Species may be found in | R. Douglas Tim Croissant | 06-08-10 |

| Determi-nation | Resource | Rationale for Determination* | Signature | Date |
|---|---|---|---|---|
| | | the project area: Ferruginous hawk (Buteo regalis, permanent resident, fairly common), Short-eared owl (Asio flammeus, transient, rare), Fringed myotis (Myotis thysanodes, permanent resident, uncommon), Kit fox (Vulpes macrotis, permanent resident, uncommon), Spotted bat (Euderma maculatum, permanent resident, rare), Townsent's big-eared bat (Corynorhinus townsendii, permanent resident, fairly common), Common chuckwalla (Sauromalus ater, permanent resident, uncommon), Gila monster (Heloderma suspectum, permanent resident, rare), Sidewinder (Crotalus cerastes, permanent resident, fairly common), Western banded gecko (Coleonyx veriegatus, permanent resident, uncommon), Western threadsnake (Leptotyphlops humilis, permanent resident, rare), and Zebra-tailed lizard (Callisaurus draconoides, permanent resident, fairly common). Some of these species may use the project area year-long, while others may use it part of the year. During project construction, some BLM Sensitive Species and general wildlife (small mammals, birds, and reptiles) could be killed or disturbed and some dens or nests destroyed. This should be minimal and short-term, and should not affect general populations of these species in the area. Larger BLM Sensitive Species and other wildlife, such as raptors and bats, could be temporarily disturbed and displaced to adjacent habitats. Once the project ceases, these larger animals should return to the area. There would be no loss of BLM Sensitive Species or general wildlife habitat. Over the long-term, the protective fences should restrict vehicles, and other surface disturbing activities, providing protection of habitat, and reducing disturbances to BLM Sensitive Species, and general wildlife in the Red Cliffs National Conservation Area (NCA). | | |
| NP | Floodplains | | D. Corry | 6/2/10 |
| NI | Fuels/Fire Management | This is an area of recent fire activity and given the current cover of cheatgrass, will likely burn again. Fence should be constructed of all metal parts to make it fire proof. | K Leany | 6/2/2010 |
| NP | Geology / Mineral Resources/Energy Production | No impact to any mineral resources. Bedrock is the Navajo sandstone. | R Schreiner | 6/3/10 |
| NI | Hydrologic Conditions | The proposed action would not impact Hydrologic Conditions | D. Corry | 6/2/10 |
| NI | Invasive Species/Noxious Weeds | There are no known noxious weed infestations on the project site. There is a substantial amount of cheatgrass (Bromus tectorum) throughout the area with nearly continuous cover in many instances. The very limited disturbance associated with this project would not likely encourage the establishment or spread of invasive or noxious weed species. | K Leany | 6/2/2010 |
| PI | Lands/Access | Existing right-of-way holders Rocky Mountain Power, City of St. George Power and Water Dept. and UAMPS need to be included in the scoping phase of this project. Also need to include DWR and private land owners as the access and gate to their properties is proposed to change. | Kathy Abbott | 6/2/2010 |
| NP | Livestock Grazing | | K Leany | 6/2/2010 |

| Determi-nation | Resource | Rationale for Determination* | Signature | Date |
|---|---|---|---|---|
| NI | Migratory Birds. | The project area supports several migratory birds during summer nesting, or during spring and fall migration. Migratory birds typically found in the project area include: several raptors, mourning doves (Zenaida macroura), common nighthawks (Chordeiles minor), house wrens (Troglodytes aedon), Northern mockingbirds (Mimus polyglottos), Scott's orioles (Icterus parisorum), Savannah sparrows (Passerculus sandwichensis), black-throated sparrows (Amphispiza bilineata), and white-crowned sparrows (Zonotrichia leucophrys). During project construction, some migratory birds could be disturbed and some nests destroyed. However, loss of nests is unlikely due to the timing of the project (late summer and fall). During fence construction, any migratory birds in the area could be temporarily disturbed and displaced to adjacent habitats. Once the project ceases, these migratory bird should return to the area. There would be no loss of habitat for these species. Over the long-term, the protective fences should restrict vehicles, and other surface disturbing activities, providing protection of habitat, and reducing disturbances to migratory birds using the Red Cliffs NCA. | Tim Croissant | 5/23/2011 |
| Geralyn McEwen | Native American Religious Concerns | BLM engages in government-to-government consultations with American Indian Tribes that claim affiliation to this region to identify sacred sites, Traditional Cultural Properties, or other areas with religious concerns. Consultations are conducted with the Paiute Indian Tribe of Utah, its respective Bands under the protocols established through a Memorandum of Understanding, signed with BLM in 1999. To date, no religious concerns have been identified by consulting tribes within this project area. | Geralyn McEwen | 2 June 10 |
| NP | Paleontology | No known paleontological sites would be impacted. Bedrock is the Navajo Sandstone. | R Schreiner | 6/3/10 |
| NP/NA | Rangeland Health Standards | | K Leany | 6/2/2010 |
| NI | Recreation | There would be a small but positive impact to recreation resources as non-motorized trails in the area would be better protected from motorized intrusions. | D. Kiel | 6/25/10 |
| NI | Socio-Economics | The proposed action would not result in disproportionate adverse impacts to the local or regional economy. | D. Kiel | 6/25/10 |
| NI | Soils | Some soil might be lost from the site during construction due to wind and water erosion. This impact is expected to be short term and minimal. | D. Corry | |
| NP | Threatened, Endangered or Candidate Plant Species | | R. Douglas | 06-07-10 |
| PI | Threatened, Endangered or Candidate Animal Species | This project would be completed for the benefit of desert tortoises, and other wildlife species within the Red Cliffs NCA. Close coordination with USFWS would occur through the planning, environmental assessment, Section 7 Consultation, and implementation phases. The project passes through low to medium densities of desert tortoises (Gopherus agassizii, Federal Threatened Species) within the Red Cliffs NCA. This project would be monitored during the construction phase by either BLM, or Red Cliffs Desert | R. Douglas Tim Croissant | 06-08-10 |

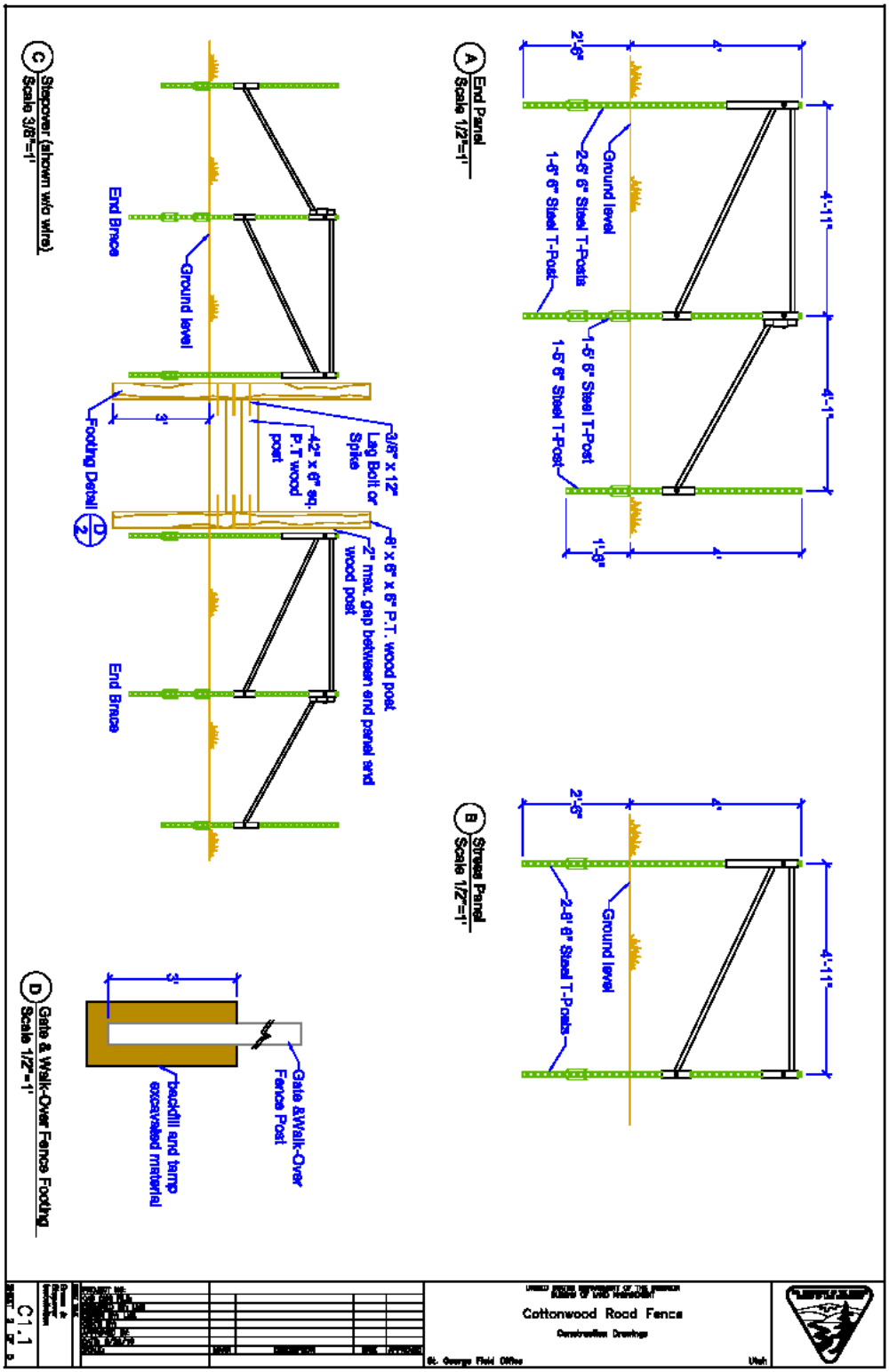
| Determi-nation | Resource | Rationale for Determination* | Signature | Date |
|---|---|---|---|---|
| | | Reserve biologists to insure no desert tortoises or dens would be disturbed. All existing desert tortoise fencing (1 inch by 1 inch mesh) would be replaced with official desert tortoise exclusion fencing (see fencing specifications, USFWS, 2005) for the protection of desert tortoises and other wildlife species. Over the long-term, the protective fences should restrict vehicles, and other surface disturbing activities, providing protection of habitat, and reducing disturbances to desert tortoises in the NCA.<br>California condors (Gymnogyps californianus, Federal Endangered Species) may use the project area infrequently (generally not suitable condor habitat) for hunting and foraging. No nests, roosts, or other special use areas for California condors have been identified in the project area. During the installation of fences, any California condors using the project area could be disturbed and forced to use adjacent habitat. The affects on California condors should be minimal and short term. After completion of the project, California condors should likely return to the area for foraging purposes. No long-term effects are anticipated.<br>Construction of the Cottonwood Road Fences, may affect, but not likely to adversely affect desert tortoises, and California condors. | | |
| NP | Wastes (hazardous or solid) | No known issues | R Schreiner | 6/3/10 |
| NI | Water Resources/Quality (drinking/surface/ground) | The proposed action is not expected to impact Water Resources. | D. Corry | 6/2/10 |
| NP | Wetlands/Riparian Zones | | D. Corry | 6/2/10 |
| NP | Wild and Scenic Rivers | There are no Wild and Scenic River segments, either designated, eligible, or suitable, within the project area. | D. Kiel | 6/25/10 |
| NP | Wilderness/WSA | There are no designated wilderness or wilderness study areas within the proposed project area. | D. Kiel | 6/25/10 |
| NP | Woodland / Forestry | | K Leany | 6/2/2010 |
| NI<br>NP | Vegetation Excluding USFW Designated Species | The very limited disturbance associated with this project would likely harm few plants. No BLM Sensitive Plants occur in the project area. | K Leany<br>R. Douglas | 6/2/2010<br>06-08-10 |
| NI | Visual Resources | The entire project area has a Visual Management Class III rating. The objectives for VRM Class III are: the level of change to the landscape can be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Any changes should repeat the basic elements found in the natural landscape – form, line, color, & texture. Because the entire project area is surrounded by transmission lines, a substantial number of large and striking vertical and horizontal lines are already present within the existing environment. The addition of smaller lines from the proposed fence would cause an insignificant increase and a VRM contrast rating is not required. The project already meets VRM Class III objectives. | D. Kiel | 6/25/10 |

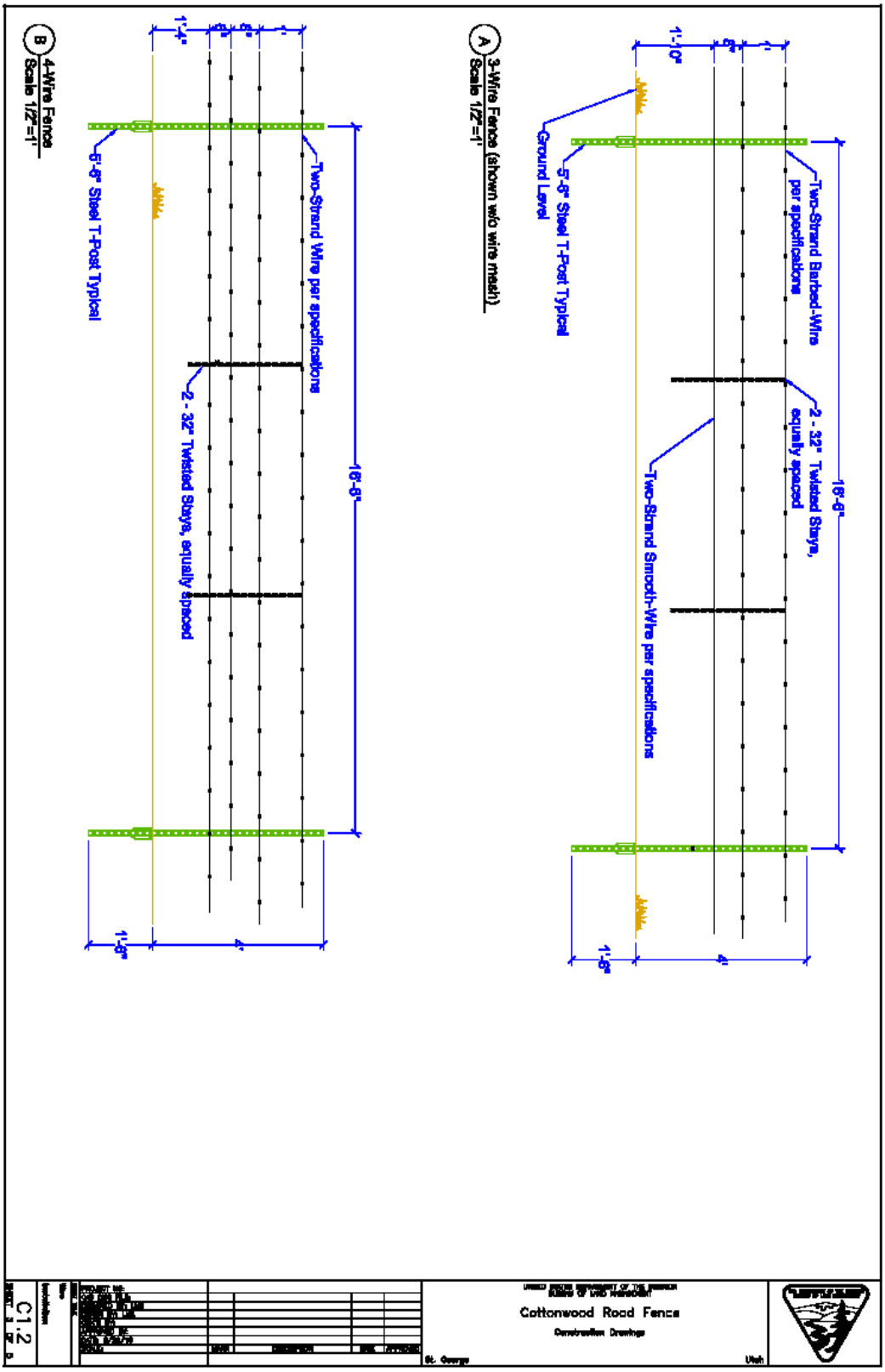
| Determi-nation | Resource | Rationale for Determination* | Signature | Date |
|---|---|---|---|---|
| NP | Wild Horses and Burros | | K Leany | 6/2/2010 |
| NP | Areas with Wilderness Characteristics | The proposed action contains no areas proposed for wilderness protection under the Red Rock Wilderness Act or otherwise identified to BLM by the public as having wilderness characteristics. | D. Kiel | 6/25/10 |

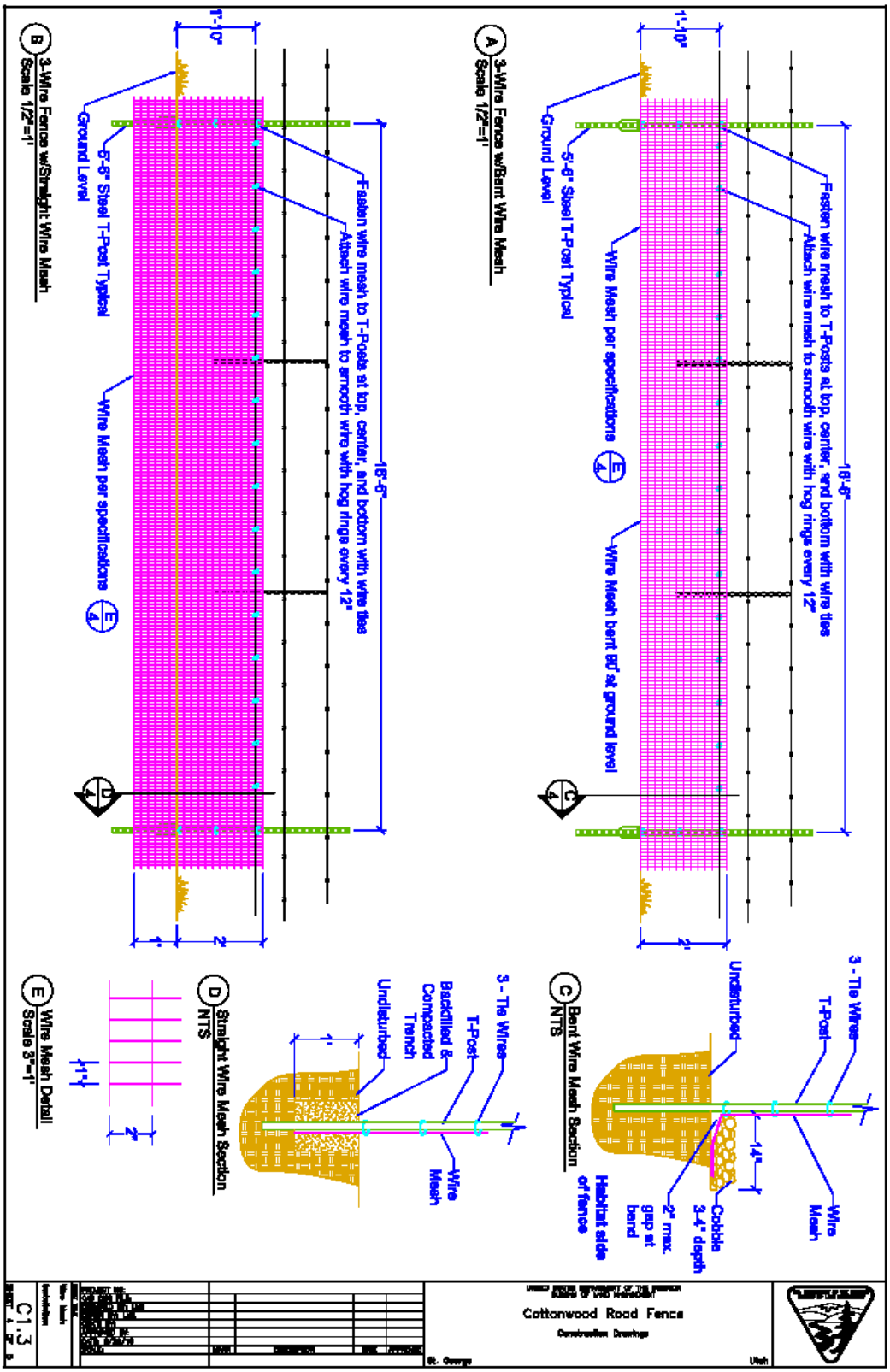
**FINAL REVIEW:**

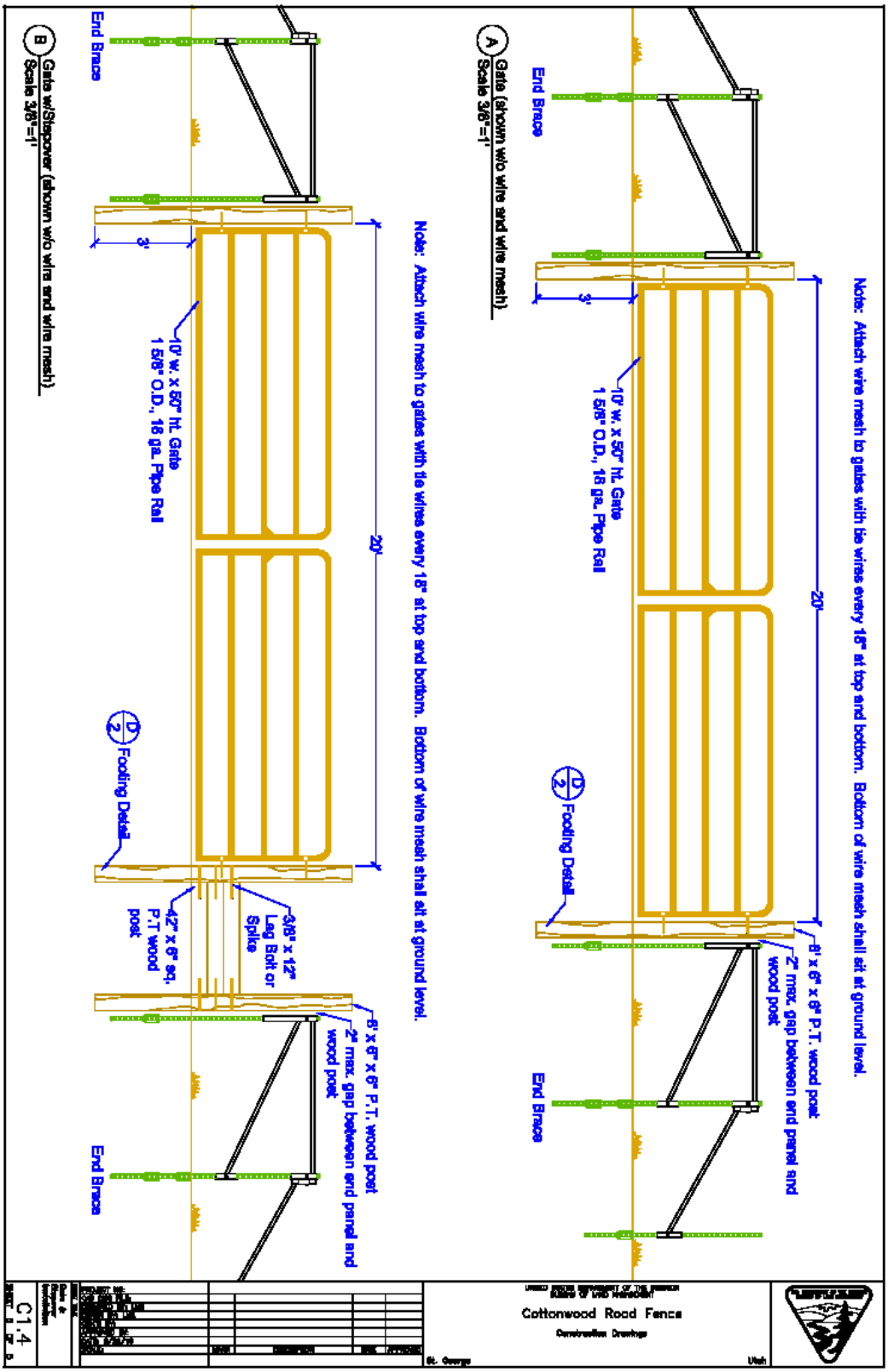
| Reviewer Title | Signature | Date | Comments |
|---|---|---|---|
| Environmental Coordinator | | | |
| Authorized Officer | | | |

**APPENDIX B Boundary Fence and Gate/Walkover Specifications**




A
3-Wire Fence (shown w/o wire mesh)
Scale 1/2"=1'
1'-10"
6"
1"
Ground Level
5'-6" Steel T-Post Typical
Two-Strand Barbed-Wire per specifications
2 - 32" Twisted Stays, equally spaced
Two-Strand Smooth-Wire per specifications
16'-6"
1'-6"
4'
B
4-Wire Fence
Scale 1/2"=1'
1'-4"
6"
1"
5'-6" Steel T-Post Typical
Two-Strand Wire per specifications
2 - 32" Twisted Stays, equally spaced
16'-6"
1'-6"
4'
C1.2
Cottonwood Road Fence
Construction Drawings
St. George
Utah


A 3-Wire Fence w/Bent Wire Mesh
Scale 1/2"=1'
1'-10"
5'-6" Steel T-Post Typical
Ground Level
Wire Mesh per specifications
Wire Mesh bent 90° at ground level
Fasten wire mesh to T-Posts at top, center, and bottom with wire ties
Attach wire mesh to smooth wire with hog rings every 12"
16'-6"
B 3-Wire Fence w/Straight Wire Mesh
Scale 1/2"=1'
1'-10"
5'-6" Steel T-Post Typical
Ground Level
Wire Mesh per specifications
Fasten wire mesh to T-Posts at top, center, and bottom with wire ties
Attach wire mesh to smooth wire with hog rings every 12"
16'-6"
C Bent Wire Mesh Section
NTS
Undisturbed
3 - Tie Wires
T-Post
Wire Mesh
14"
2" max. gap at bend
Cobble 3-4" depth
Habitat side of fence
D Straight Wire Mesh Section
NTS
3 - Tie Wires
T-Post
Backfilled & Compacted Trench
Undisturbed
Wire Mesh
E Wire Mesh Detail
Scale 3"=1'
Cottonwood Road Fence
Construction Drawings
St. George
Utah
C1.3


A Gate (shown w/o wire and wire mesh)
Scale 3/8"=1'
End Brace
3'
10' w. x 50" ht. Gate
1 5/8" O.D., 16 ga. Pipe Rail
20'
8' x 6" x 6" P.T. wood post
2" max. gap between end panel and wood post
D/2 Footing Detail
End Brace
Note: Attach wire mesh to gates with tie wires every 18" at top and bottom. Bottom of wire mesh shall sit at ground level.
B Gate w/Stepover (shown w/o wire and wire mesh)
Scale 3/8"=1'
End Brace
3'
10' w. x 50" ht. Gate
1 5/8" O.D., 16 ga. Pipe Rail
20'
D/2 Footing Detail
42" x 6" sq. P.T. wood post
3/8" x 12" Lag Bolt or Spike
8' x 6" x 6" P.T. wood post
2" max. gap between end panel and wood post
End Brace
Note: Attach wire mesh to gates with tie wires every 18" at top and bottom. Bottom of wire mesh shall sit at ground level.
Cottonwood Road Fence
Construction Drawings
St. George
Utah
C1.4